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EXAMINER

GRAHAM, ANDREW R

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2644

DATE MAILED: 04/26/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/442,627

Applicant(s)

RIGGS, BRETT D.

Examiner

Andrew Graham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Response to arguments

1. The applicant's response submitted February 9, 2004 has been fully considered, but are not persuasive. As detailed below, it is respectfully submitted that the Kirson reference still makes obvious the added limitations of the independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-4, 9-12, and 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art, in view of Kirson et al (USPN 6114970). Hereafter, "Kirson et al" will be referred to as "Kirson".

The applicant's admitted prior art discloses general information regarding original equipment manufacturer's stereos and after-market replacement stereos. The admitted prior art specifically discusses controls for a factory installed stereo.

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The disclosure states that control units are known in the prior art to be positioned adjacent to a driver's seat, on the the steering wheel, and in the backseat of a vehicle (page 1, lines 18-20, and page 2, lines 4-5 and 15-17). These controls read on "at least one local vehicle stereo control device originally installed in the vehicle to control an originally installed stereo receiver". The admitted prior art also discloses that these local stereo controls are rendered inoperable when a replacement stereo is installed in the vehicle (page 2, lines 24-28). These local stereo controls are disclosed as being hardwired to the original stereo equipment (page 2, lines 27-28). This form of connection reads on "responsive to signals in the first format". The admitted prior art also discloses that replacement stereos are controlled with a handheld wireless remote, though this remote can be lost or misplaced (page 2, lines 30-31 and page 3, lines 8-9). This wireless controlling of a replacement stereo device reads on "signals in a second format to replacement stereo receiver that is responsive to signals in a the second format installed in the vehicle to replace the originally installed stereo receiver". The admitted prior art also discloses that the remote wireless controls is an infrared type remote control.

The admitted prior art does not specify:

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- a stereo interface device that receives signals in a first format
- that this stereo interface produces output signals in a second format
- that this stereo interface translates the signals in the first format to signals in the second format so that the local control device can operate the replacement stereo receiver

Kirson discloses a method for uniquely addressing after-market and secondary electronic devices added to the communications architecture of a vehicle. The original equipment manufacturer (OEM) equipment includes steering wheel controls (16), and in-dash display (18), a door lock system (20), and other vehicle systems (24) (col. 3, lines 1-3). The gateway (26) enables signals originating from devices on the OEM bus (12) to be communicated to devices additional electronic devices on the ITS bus (14) and signals originating from the ITS bus (14) to be received on the OEM bus (12) (col. 3, lines 5-26). Kirson gives an example of the operation of such a device, wherein a steering wheel control (16) may be used to control the operation of a cell phone (28) attached to the system (col. 3, lines 21-24). One particular electronic device disclosed for the aftermarket part of the system is an infra-red interface device, which Kirson discloses may couple to a PDA (36) or pager (38). In view of the capabilities introduced by such components, the ITS bus (14) and

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gateway controller (26) reads on "A stereo control interface device" (col. 3, lines 3-5). The connections between the steering wheel controls (16 and the OEM bus (12) and the gateway controller (26) reads on "receives signals in a first format from at least one local stereo control device". The connection of the ITS bus and IR interface (34) to the pager (38) and PDA (36) reads on "produces output signals in a second format". The processing that is done between the gateway controller (26), ITS bus (14), and IR interface (34) reads on "the interface translates the signals in the first format to signals in the second format". The operation that is enabled through these add-on components, when taken in view of the cited teachings of the applicant's admitted prior art, reads on "so that the at least one local vehicle stereo control device originally installed in the vehicle can be used to control the operation of the replacement stereo receiver via the stereo control interface device".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to incorporate the gateway and bus system of Kirson into the local stereo control system of the applicant's admitted prior art. The motivation behind such a modification would have been that the bus interface system of Kirson would have enabled the use of the original manufacturer's controls - as is taught by Kirson - for aftermarket electronic devices, such as the replacement audio system of the admitted prior art. The teachings of Kirson

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particularly include an IR interface (34), which is the manner of communication that corresponds to the 'typical' remote control of a replacement stereo, as is disclosed by the applicant. The teachings of Kirson also disclose a manner for uniquely identifying and addressing added peripherals that is not dependant upon the physical location of the added devices in the system, which would have potentially enabled multiple devices to be connected through this IR interface.

Regarding **Claim 2**, Kirson explicitly illustrates controls located on the central portion of the steering wheel of a vehicle (Figure2). As stated above, the applicant's admitted prior art includes the teaching of a steering wheel mounted control (page 2, lines 4-5). These teachings read on "at least one switch located adjacent the steering wheel of the vehicle that is originally electrically connected to a factory installed stereo of the vehicle".

Regarding **Claim 3**, the applicant discloses that high-end motorcycles typically include expensive stereo systems, and such systems are often equipped with local stereo controls positioned on the handlebars (page 7, lines 20-26). This type of motorcycle audio control arrangement is specifically described as "commonly known" (page 7, line 21). This reads on "a motorcycle and the at least one local vehicle stereo control device comprises at least one switch located adjacent the handlebars of the motorcycle". Regarding **Claim 4**, the applicant's admitted prior art discloses that local stereo controls are hardwired to the stereo (page 2,

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lines 26-28). The teachings of Kirson include the steering wheel mounted controls (16) as being connected to an OEM bus (12). Such connections read on "the stereo interface device is adapted to be electrically coupled to the t least one local vehicle stereo control device". The operation of the IR interface (34) in view of the applicant's admitted prior art teaching that replacement stereos typically have an infrared remote control, reads on "produce a wireless signal to the replacement stereo receiver corresponding to the signal received from the at least one local vehicle stereo control device".

Regarding **Claim 4**, Both the applicant's admitted prior art disclose steering wheel mounted controls, which reads on "the stereo interface is adapted to be electrically coupled to the at least one local vehicle stereo control device". Kirson teaches an interface wherein the controls (16) of an OEM bus (12) are able to interact with aftermarket components connected to an ITS bus (14) (col. 3, lines 15-24). Kirson also includes an IR interface for accessory electronics (col. 3, lines 5-10). In view of this capability, the teachings of Kirson read on "produce a wireless signal to the replacement stereo receiver corresponding to the signal received from the at least one local vehicle stereo control device".

Regarding **Claim 9**, please refer to the like teachings of Claim 1 regarding similar recited limitations. As also stated above, local controls in both the applicant's admitted prior art and the reference of Kirson are mounted on the steering wheel,

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which reads on "at least one local stereo control device originally mounted in a first location on the vehicle" (item 16 of Kirson and page 2, lines 4-5 of disclosure). The admitted prior art also discloses that the replacement receiver can be mounted in a position where the wireless remote control must be pointed towards the receiver, in a direction away from the path of travel (page 3, lines 13-16). This direction of the replacement stereo receiver, which corresponds to the location of the replacement stereo receiver, reads on "mounted in a second location on the vehicle". Kirson discloses that the steering wheel controls (16) are connected to an OEM bus (12), gateway (26), and ITS bus (14). This connection reads on "able to receive the local stereo control signals in the first format from the at least one originally mounted stereo control device". The IR interface (34) is described as being able to communicate with a pager (38) and a PDA (36), the capability of which inherently means that the IR interface (34) part of the connection system is mounted in an operable manner in the vehicle.

Regarding **Claim 10**, Kirson explicitly illustrates controls located on the central portion of the steering wheel of a vehicle (Figure 2). As stated above, the applicant's admitted prior art includes the teaching of a steering wheel mounted control (page 2, lines 4-5). These teachings read on "at least one switch located adjacent the steering wheel of the vehicle that is originally electrically connected to a factory installed stereo of the vehicle".

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Regarding **Claim 11**, the applicant discloses that high-end motorcycles typically include expensive stereo systems, and such systems are often equipped with local stereo controls positioned on the handlebars (page 7, lines 20-26). This type of motorcycle audio control arrangement is specifically described as "commonly known" (page 7, line 21). This reads on "a motorcycle and the at least one local vehicle stereo control device comprises at least one switch located adjacent the handlebars of the motorcycle".

Regarding Claim 4, the applicant's admitted prior art discloses that local stereo controls are hardwired to the stereo (page 2, lines 26-28). The teachings of Kirson include the steering wheel mounted controls (16) as being connected to an OEM bus (12).

Such connections read on "the stereo interface device is adapted to be electrically coupled to the t least one local vehicle stereo control device". The operation of the IR interface (34) in view of the applicant's admitted prior art teaching that replacement stereos typically have an infrared remote control, reads on "produce a wireless signal to the replacement stereo receiver corresponding to the signal received from the at least one local vehicle stereo control device".

Regarding **Claim 12**, please refer to the like teachings of Claim 1, particularly that the applicant's admitted prior art teaches that replacement stereo receivers are known in the art to include IR remote controls (page 6, lines 25-27).

Regarding **Claim 18**, please refer to the like teachings of Claim 1, particularly the reference of Kirson, which discloses

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steering wheel controls (16) connected to a OEM bus (12) and gateway (26), and that one of the add-on connections is an IR interface (34). The connection of the steering wheel controls to the OEM bus (12) and gateway (26) reads on "the first format is a hard-wired communication format" and the function of the IR interface reads on "the second format is a wireless communication format".

Regarding **Claim 19**, please refer above to the discussion of Claim 18.

4. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Kirson as applied above, and further in view of Brusky et al (USPN 5903259). Hereafter, "Brusky et al" will be referred to as "Brusky"

As detailed above, the specification of the current application discloses that the typical after-market receiver is equipped with a wireless receiver and a corresponding infrared remote control (page 6, lines 25-27). These remote controls are also disclosed as often being able to adjust various aspects of the stereo's operation, including the channel and volume settings (page 6, lines 27-28). This reads on "the replacement stereo receiver is adapted to receive a first wireless signal from a handheld remote control upon a user depressing a first function key on the handheld remote control to change a first function of

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the operation of the replacement stereo receiver". The reference of Kirson discloses an interface device for connecting OEM components of a vehicle to accessory or aftermarket electronic devices. One of the accessory connections is disclosed as being an IR interface.

The applicant's admitted prior art in view of Kirson does not specify:

- that the stereo control interface outputs a signal to the receiver corresponding to a wireless signal received by the replacement stereo device

Brusky discloses a system of mapping the remote controls of a standard consumer electronics device into the controls of a wireless keyboard. The keyboard (100) is able to emit controls according to a standard computer IR interface to a CPU (92), or controls in the standard interface for a consumer electronic device (94) (col. 7, lines 36-57). Brusky discloses that the signals may be infrared or one of other well known types of wireless communication (col. 7, line 65 - col. 8, line 8). Brusky states that the keyboard (100) can be programmed with the IR commands for an electronic device through a variety of well-known programming techniques (col. 8, lines 9-19). Brusky also teaches that the keyboard or dual interface device may be implemented in a variety of devices, including a remote control and a wired keyboard (col. 4, lines 10-16). The functionality of this wireless keyboard, in view of the teachings of Kirson, reads

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on the limitation "the stereo interface produces a signal corresponding to the first wireless signal in response to a driver activating a first local vehicle stereo control device".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to enable the IR interface of the system of the applicant's admitted prior art in view of Kirson to emit the signals corresponding the standard input of an IR remotely controlled device, as is taught by Brusky. The motivation behind such a modification would have been that such a capability would have enabled standard electronic device, such as the replacement stereo of the applicant's admitted prior art, to be controlled in a format that is already programmed or enabled on the standard electronic device. Kirson discloses an IR interface for using OEM vehicle controls with devices on an aftermarket component bus, wherein one of these components is an IR interface, and Brusky discloses that such an IR interface may be used to control standard consumer electronics with the signals initially associated with such a device.

5. **Claims 6-8 and 13-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Kirson and Brusky as applied above, and further in view of Kadnier (USPN 6097520).

As detailed above, the applicant's admitted prior art discloses general information regarding original equipment

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manufacturer's stereos and after-market replacement stereos. Kirson discloses a system for connecting OEM equipment to aftermarket devices, and enabling interaction between the devices. Brusky discloses that the IR signals of an electronic device may be programmed into a remote control device other than the original remote control device associated with the electronic device. Brusky states that these IR signals may be programmed into the alternate remote control device in a variety of manners (col. 8, lines 9-19). The operation of the controls on the keyboard of Brusky, in view of the particular teachings of Kirson, to emit these IR signals for the electronic device reads on "such that subsequent activation of the at least one local vehicle stereo control device results in a corresponding wireless signal being transmitted to the replacement stereo receiver".

However, the applicant's admitted prior art in view of Kirson and Brusky does not specify:

- that the stereo control interface includes a memory
- that the stereo control interface is programmable to store sequential wireless signals corresponding to the local stereo control device

Kadnier discloses a universal remote control receiver that can be programmed to selectively recognize and respond to a variety of input control signals from various input remote controls (col. 3, lines 34-45). Illustrated in Figures 5A-5C, the system of Kadnier first instructs a user to input a command

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key to be assigned a function (204-210), and then, in a later step (234), the user is instructed to assign a command to be execute upon receipt of the input control command (col. 9, lines 19-59 and col. 12, lines 25-32). Kadnier discloses that the system is particularly intended to operate in response to signals sent by infrared remote controllers (col. 4, lines 4-12). Kirson specifically states that a "sequence" of a hardware specific command may be captured and stored by the system (col. 9, lines 24-27). After the data has been verified, the input sequence is stored in a command storage area (118) (col. 12, lines 19-24). This reads on "the stereo interface control device includes a memory and is programmable such that a programmer can sequentially store wireless signals corresponding to the at least one local vehicle stereo control devices".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the capabilities of the programmable universal receiver of Kadnier into the IR interface part of the system of the applicant's admitted prior art in view of Kirson and Brusky. Such a modification would have been desirable because it would have enabled the user to define the manner in which OEM controls interact with aftermarket devices through the IR interface of Kirson. It would have also enabled the controls to programmed for the interface device in direct manner, rather than the downloading of control signals or insertion of memory modules as described by Brusky.

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Regarding **Claim 7**, Figures 5A-5C of Kadnier disclose the process by which a user may program the receiver to selectively associate a set of output signals with an input signal (col. 9, lines 19-67, col. 10, lines 1-67, col. 11, lines 1-67, and col. 12, lines 1-62). This reads on "the stereo control interface device includes a program mode wherein the stereo control interface device can be programmed by a programmer activating a first local vehicle stereo control device and the first function key on the handheld remote control".

Regarding **Claim 8**, the universal remote receiver of Kadnier includes an infrared receiver for receiving a plurality of infrared input signals (col. 4, lines 4-12). This reads on "a wireless receiver" and "receive the first wireless signal from the handheld remote control". The received command is then stored in a command storage area, which reads on "store a corresponding signal in the memory such that the stereo control interface device can recall the stored signal" (col. 12, lines 25-29). The storage area (118) enables later operation of the designated commands associated with the input sequence (col. 12, lines 63-67). The teachings of Brusky disclose that these stored control signals may be later emitted by the interface device, which reads on "wireless transmitter" and "recall the stored signal and thereby generate a wireless signal corresponding to the first wireless signal so as to change the first function of the stereo receiver".

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Regarding **Claim 13**, please refer to the like teachings of Claim 4 and 5. Regarding **Claim 14**, please refer to the like teachings of Claim 6.

Regarding **Claim 15**, please refer to the IR interface of Kirson and the IR receiver of Kadnier, both of which are discussed above in more detail in regards to Claims 1 and 6.

Regarding **Claim 16**, please refer to the IR interface of Kirson and the IR transmitter of Brusky, both of which are discussed in more detail in regards to Claims 1 and 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is 703-308-6729. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

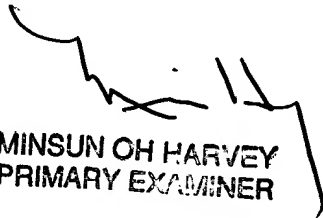
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG

Andrew Graham
Examiner
A.U. 2644

ag
April 19, 2004


MINSUN OH HARVEY
PRIMARY EXAMINER